

Amendments to the claims:

Please cancel Claims 2, 9, 13 and 22-26.

1. **(Currently amended)** A low energy method of pyrolysis of hydrocarbon material comprising:
 - providing said hydrocarbon material;
 - loading said hydrocarbon material into a reaction chamber;
 - adding a clay catalyst to said reaction chamber, and
 - heating said reaction chamber for a sufficient time to provide substantially complete pyrolysis, wherein said heating of said reaction chamber results in a reaction temperature of said hydrocarbon material of between about 150° to 850° F,
 - said heating occurring in at least a first, second and third phases sequentially over space as said hydrocarbon material moves through said reaction chamber, and fuel input is adjusted to take advantage of the exothermic nature of the reaction;
 - said method occurring while maintaining a vacuum in said reaction chamber and yielding reaction products comprising a solid-carbonaceous-residue carbon black, a liquid hydrocarbon product and a combustible gas.
2. **(Cancelled)**
3. **(Currently amended)** The method of Claim 2 1, wherein said clay is selected from the group consisting of montmorillonite, bentonite, beidillite and combinations thereof.
4. **(Currently amended)** The method of Claim 2 1, wherein said clay is pillared clay.
5. **(Currently amended)** The method of Claim 2 1, wherein said clay is a natural ore.
6. **(Currently amended)** The method of Claim 1, wherein said clay catalyst is a commercial clay containing product.
7. **(Original)** The method of Claim 6, wherein said commercial clay product is selected from the group consisting of cat litter and oil spill absorbent and combinations thereof.

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8. **(Currently amended)** The method of Claim 2 1, wherein said catalyst is added in an amount of about 0.01 wt.% to 3.0 wt.%, based on the total weight of said hydrocarbon material.

9. **(Cancelled)**

10. **(Original)** The method of Claim 1, wherein said reaction temperature of said hydrocarbon material is maintained at between about 350° to 850°F.

11. **(Cancelled)**

12. **(Previously presented)** The method of Claim 1, wherein said first, second and third phase occur sequentially over time.

13. **(Cancelled)**

14. **(Original)** The method of Claim 1, wherein said vacuum is maintained at a pressure of between about 2 inches to 16 inches mercury.

15. **(Previously presented)** The method of Claim 1, wherein said vacuum is maintained at pressure of between about 2 inches to 16 inches mercury.

16 – 21 **(Cancelled)**

22 – 26 **(Cancelled)**